Wireless Services Weekly

May 4, 2005

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Mobile Data Network Update
By: Phil Bates, MIS Director, DPS

Webb Hill is the latest mobile data site to be brought online in the state. Webb Hill has been a cooperative effort between the City of Saint George and State ITS. The map at the right denotes the latest status of the mobile data project.

View of St. George from Webb Hill

Webb Hill from New Tower

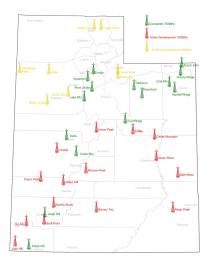The state was able to reorganize enough Homeland Defense funding to move ahead with mobile data infrastructure in the south-central, and southeastern areas of the state. This will give us a general statewide coverage pattern, but there are many areas yet to be filled in. As more funding becomes available, we will need to look at prioritization based on criteria such as: which agencies will receive Homeland Defense funding for mobile data modems in areas not currently blanketed by coverage.

The next step will need to address speed. We are currently operating at a speed of 33Kbps as we roll out the initial coverage. The infrastructure can and must be upgraded to 64 and then to 128Kbps in order to achieve the speeds that our public safety environment needs to operate in.

Nancy McConnell (State ITS) is the Product Manager of the state's mobile data network. Nancy is working with state and local government agencies through the Utah Wireless Integrated Network (UWIN) to provide for their needs and address their concerns. For more information on the mobile data product, contact Nancy at (801) 538-3019, or visit the mobile data website at:
http://its.utah.gov/productsservices/wirelessnetwork/wirelessdata/mobiledata.htm

700MDN Project Status
Rev: 04/28/05

Click to See Larger Image

CAPRAD
By: Boyd Webb, Strategic Network Planner

When the Federal Communication Commission set aside the new portion of frequency spectrum in the 700 MHz band, they also changed the process for application and coordination of these new channels.

The first step in the age-old process used in the VHF/UHF bands, involves submitting a new application directly to one of four FCC approved frequency coordinators. The frequency coordinators then have the responsibility for frequency selection, FCC compliance, and protecting the interests of existing licensees. After receiving the application from a frequency coordinator with the necessary letters of concurrence, approval, and technical demonstration, the FCC completes the process and issues the license.

The new process established by the FCC for applications in the 700 and 800 MHz bands is a little different. In order to understand the new process one must first understand the "shared" and "exclusive use" concepts. Frequencies in the VHF/UHF spectrum are designated as "non-exclusive shared" resources. The operational demands of public safety are taken into consideration when channels are coordinated and assigned, but exclusive use of any specific VHF/UHF frequency by a single entity was never the intention of the FCC.

Public safety does have an advantage over the business/industrial pool in the VHF/UHF spectrum where it is common practice for several commercial entities to share a single radio channel with different PL tones for separation of radio traffic. This competitive environment doesn't lend itself to advanced technologies like trunking, simulcast, multicast, or mobile mesh networking systems.

Frequencies in the 700 MHz and 800 MHz spectrum are a different matter altogether. Channels in the new allocation are granted under an exclusive use provision within specific geographic boundaries. This "exclusive non-shared" approach allows system planners, and network providers, to deploy cellular based technologies and advanced trunked systems. Mobile mesh networking also becomes viable in the exclusive use spectrum.

In order to accommodate new initiatives and flexibility in the design of systems, using channels in the new 700/800 MHz spectrum, the FCC established Regional Planning Committees (RPC's). RPC's act on a local level to promote efficient spectrum use based on local needs and considerations. One of the primary tasks required of RPC's by the FCC is the establishment of a database in which RF frequencies will be managed. Each region is free to develop it's own database, or utilize the system developed by the National Coordination Committee (NCC) for the purpose of managing the new spectrum.

CAPRAD is a powerful database that has been carefully designed to accommodate the unique requirements of public safety communication system deployment. The Region 41 Planning Committee, which represents all entities within the boundaries of Utah, has decided to use CAPRAD rather than developing an isolated database system for managing the spectrum in 700 MHz.

The regions adjacent to Region 41 have also decided to use CAPRAD. This allows for an efficient multi-regional planning synergy that will also eliminate potential interference in bordering areas. Many elements of CAPRAD are accessible online at: http://caprad.nlectc.du.edu/cp/index.jsp ('guest' can be used in both fields of the login, and will give you 'read only' access to the database.

Public safety administrators and technical personnel are encouraged to access CAPRAD to discover data management information. Classes to introduce CAPRAD and provide training will be scheduled for the Region 41 planning committee members and other interested individuals. Please contact Boyd Webb @ 801-965-3857 for additional information.

A New Tech for Northern Utah
By: Doug Chandler, Wireless Services Manager

Michael Bright has accepted the challenge to fill in for Harold Clements, who was recently called to active duty in the armed forces. Michael will be working with Jeff Stork in the Ogden radio shop location for the next 1½ years. Michael has been working in the Salt Lake radio shop for the last year, and was a member of our vehicle installation team for three years previous to that.

Michael was able to advance from the Install Bay after receiving a degree in electronics at Salt Lake Community College, followed by successfully completing the FCC General Radiotelephone license exam. Michael and his wife live in West Jordan with their three kids; 2 boys and a girl.

Michael's contact information: mbright@utah.gov   Wk: (801) 965-4878   Pgr: (801) 242-4877

'Major' Changes
By: Gala Dumas, DFFS Fleet Supervisor

DPS has swapped the duties of Major Neil Porter and Major Mike Kuehn. Neil has been the "go to guy" for Highway Patrol on matters concerning the UHP vehicle class standards, equipment purchasing, budget matters and whatever else needed a 'Major' decision concerning UHP vehicles. His new duties will be overseeing patrol operations in the field. It has been great working with Neil for the past several years. He will be missed.

Mike Kuehn has been with law enforcement for 20 years, and with UHP for 15. I look forward to serving with him and showing him the 'Replacement Cycle' ropes. Please join with me in welcoming the newest member of our clan.

Calendar

UWIN Technology Steering Committee Meeting
Friday, May 13, 2005
10:00 am - noon
Wasatch County Search and Rescue
1361 S. Highway 41 (just past Arby's)
Phone Bridge: 1-877-581-9247
Participant Code: 604370

UCAN Meeting
Tuesday May 17, 2005
2:00 – 4:00 pm
VECC
5360 South Ridge Village Drive (5885 West)
Salt Lake City

911 Committee
Thursday, May 19, 2005
10:00am - 12:00 noon
Rampton Complex
4501 S. 2700 W.
UHP Large Conference Room

NASTD Western Region Seminar
Salt Lake Hilton
June 4-8
Conference Link and Agenda

Utah Sheriffs' Association 10th Annual Conference and Exhibition
St. George Dixie Center
September 11-13
Conference Link